

ABSTRACT

Title: ANTHROPOMETRY, MORBIDITY AND MORTALITY AMONG THE INFANTS OF DIABETIC MOTHERS IN A TERTIARY CARE CENTRE

UNIVERSITY REG NO. 201417652 MD PAEDIATRICS

BACKGROUND: Infants born to diabetic women have certain distinctive characteristics, including large size and high morbidity risks. Ponderal index (PI) is a weight-height related parameter that is mainly used to assess the pattern of fetal growth in small-for-gestational age infants. **OBJECTIVES:** This study aimed to quantify the disproportionate growth between the Infants of Diabetic Mothers and that of NonDiabetic Mothers using Ponderal Index and to determine the morbidity and mortality pattern among infants of diabetic mothers. **RESEARCH DESIGN AND METHODS:** This was an observational cross-sectional study conducted in the Department of Obstetrics and in the Department of Paediatrics (Neonatology), Government Theni Medical College Hospital, Theni, India during the period from September 2014 to August 2015. Totally 316 neonates were included in the study. Out of them 79 were born to Diabetic mothers and 237 were born to Non-diabetic mothers. Ponderal Index was calculated using the formula: $PI = \text{Weight (grams)} \times 100 / [\text{Length (cm)}]^3$. Data on delivery mode, gestational age, birth weight, other associated morbidities, investigation results and outcome were collected and analyzed using SPSS software 16.0. **RESULTS:** Eighty four percent of the IDMs were born to mothers with gestational diabetes; while sixteen percent were born to mothers with pregestational DM. 70(88.6%) were born by Caesarian section among IDMs. The mean PI of infants of diabetic mothers was significantly higher than that of infants of non-diabetic mothers (2.69 and 2.45 respectively, $p < 0.05$). The incidence of respiratory distress, hypoglycemia, hypocalcaemia and birth asphyxia was higher among the LGA IDMs compared to AGA IDMs. Major congenital heart diseases were more frequently observed in IDMs compared to the incidence in general population. **CONCLUSION:** The results of this study suggested that there is disproportionate growth in the Infants of Diabetic Mothers as evidenced by higher PI and birth weight. Metabolic complications and respiratory distress were more common in LGA IDMs and need close monitoring in the nursey. Screening Echocardiography in all IDMs will help to diagnose and manage cardiac cases earlier and better.

Key words: Infants of Diabetic Mothers, Anthropometry, Morbidity, Ponderal Index, Hypoglycemia, Hypocalcemia, Respiratory distress.